

## **REMARKS**

### **I. Introduction**

Upon entry of the present amendment, claims 1-11 and 14 will be pending in this application, with claims 9-11 being withdrawn, claims 12-13 being previously cancelled, and with new claim 14 currently added. Claims 1, 2, 4, and 6 have been amended to clarify certain aspects of the invention. Support for these amendments appears in the specification at least at pages 4, 8-9, FIG. 1, and original claim 3. Support for new claim 14 appears in the specification at least at pages 9-10 and FIG. 1. Based on the following remarks, Applicants respectfully request reconsideration and allowance of the pending claims.

### **II. 35 U.S.C. § 102**

The Examiner has rejected claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Coakley (International Patent Application No. WO 98/50133). The Examiner submits that Coakley teaches every element of the rejected claims. Applicants respectfully traverse this rejection and request reconsideration and withdrawal thereof.

Without acquiescing to the Examiner's position but in the interest of advancing the prosecution of this application, Applicants have clarified claim 1 to recite "***first inlet and a first outlet***" as well as a "***second inlet and a second outlet.***" The claimed apparatus is intended for use in ***moving particles*** entrained in a first fluid (entering and exiting through one inlet/outlet set) to a second fluid (entering and exiting through the other inlet/outlet set.)

By contrast, Coakley is directed to ***filtering*** particles from a ***single fluid***. For this purpose, Coakley discloses an apparatus comprising ***only a single inlet*** (for a particle suspension) and two outlets (for cleared fluid and concentrated particles, respectively). In

use, particles are attracted to a pressure node of a standing wave located at or adjacent the center of the channel or conduit. This enables concentrated particles to be collected at one outlet and cleared fluid at the other. The problem that Coakley addresses is particle concentration, which is solved by providing a pressure node within the suspension, and thereby directing the particles to an outlet.

Coakley does not disclose an apparatus comprising *both first and second inlets and outlets*, i.e., an apparatus comprising an inlet and an outlet for each fluid, such that there are *two inlets* and two outlets. It is well-settled that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” See MPEP § 2131; *Verdegaal Bros. V. Union Oil Co. of Calif.*, 814 F.2d 628, 631 (Fed. Cir. 1987). Because Applicants have shown that Coakley does not teach or disclose every claimed element, it is respectfully submitted that this rejection should be reconsidered and withdrawn.

Moreover, the present application is directed to moving or transferring particles from one fluid to another fluid. In order to achieve movement of particles between two fluids, the fluids should be in contact with each other, but mixing of the two fluids should be minimal. The apparatus of the present application thus comprises respective inlet and outlet means for each fluid (i.e., two inlets and two outlets) in communication with the conduit such that in operation mixing between fluids is minimal. Minimal mixing is provided by both fluids having contacting laminar flow.

In use, a suspension of particles (e.g., particles in fluid 1) is flowed from the first inlet through the conduit to first outlet, while at the same time a particle-free fluid (e.g., fluid 2) is flowed from the second inlet through the same conduit to the second outlet. The two fluids contact each other but with minimal mixing, due to the fact that they each enter through *separate inlets*. A pressure node is produced in fluid 2 (in this example, the particle-free fluid) such that particles move from fluid 1 (the suspension) to fluid 2, the result being that cleared fluid 1 is collected at the first outlet and a suspension of particles in fluid 2 is collected at the second outlet. Thus, the problem addressed by the present application is movement of particles between two fluids, which is solved by (a) introducing fluids through separate inlets and (b) by providing contacting laminar flow of the two fluids such that in operation mixing between fluids is minimal.

Although obviousness rejections under 35 U.S.C. 103(a) have not been made, Applicants present the following distinctions and arguments in order to address and preempt any obviousness rejections that may be set forth or considered necessary or appropriate by the Examiner. The presently presented claims should also be found to be non-obvious over the disclosure of Coakley for at least the following reasons:

- Coakley is not concerned with moving particles between two fluids, especially between two fluids which are substantially not mixed, but instead focuses on filtration of particles from a single fluid.
- The skilled person would not be motivated to modify the apparatus of Coakley to include more than one inlet, since one inlet is optimal for providing filtration.

- There is no direction or suggestion in Coakley to move particles between two fluids which are *not* mixed. The apparatus of Coakley comprises a single inlet for delivering fluid to the conduit, and thus the two fluids *must* be mixed.
- There is no direction or suggestion in Coakley as to how the skilled person would seek modify the apparatus of Coakley to provide a flow of two fluids with minimal mixing, and especially not to provide movement of particles between the two fluids.
- The problem solved by Coakley is completely different to the one solved by the present application, and the problems are solved by completely different systems. There is thus no reason why one of ordinary skill in the art would be motivated to solve the problem of the present application upon reviewing the Coakley publication.

**CONCLUSION**

For at least the above reasons, Applicants respectfully request allowance of the pending claims and issuance of a patent containing these claims in due course. If the Examiner believes there are any issues that can be resolved via a telephone conference, or if there are any informalities that can be corrected by an Examiner's amendment, he is invited to contact the undersigned.

Respectfully submitted,

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